

WHAT IS CLAIMED IS:

1. A method of controlling the operation mode of a hybrid access terminal (HAT) capable of communicating a first communication system that supports voice service and low-speed data service and a second communication system that supports high-speed data service, the method comprising the steps of:

monitoring both the first and second communication systems in a hybrid operation mode by the HAT; and

transitioning from the hybrid operation mode to a data-only operation mode, upon receipt of a message ordering mode transition from the second communication system, discontinuing monitoring the first communication system, and monitoring only the second communication system by the HAT.

2. The method of claim 1, further comprising the steps of:

15 wrapping a signaling message from the first communication system in a signaling message format of the second communication system and transmitting the wrapped signaling message to the HAT in the data-only operation mode by the second communication system; and

processing the wrapped signaling message in the HAT.

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3. The method of claim 3, wherein the signaling message is an overhead message including system parameters of the first communication system.

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4. The method of claim 1, further comprising the steps of:

wrapping a paging message for voice call termination from the first communication system in the signaling message format of the second communication system and transmitting the wrapped paging message to the HAT in the data-only operation mode by the second communication system;

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tuning to the first communication system according to the system

parameters of the first communication system, transitioning to a voice call connection mode, and establishing a voice call by the HAT; and

transitioning from the voice call connection mode to the data-only operation mode by the HAT, upon release of the voice call.

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5. The method of claim 1, further comprising the steps of:

wrapping a data burst message for transmission of a short message from the first communication system in the signaling message format of the second communication system and transmitting the wrapped data burst message to the

10 HAT in the data-only operation mode by the second communication system; and

extracting the short message from the wrapped data burst message and displaying the short message by the HAT.

6. The method of claim 1, further comprising the step of:

15 wrapping a signaling message destined for the first communication system in the signaling message format of the second communication system and transmitting the wrapped signaling message to the second communication system by the HAT.

20 7. The method of claim 1, further comprising the step of:

wrapping a location registration message for registering the location of the HAT to the first communication system in the signaling message format of the second communication system and transmitting the wrapped location registration message to the second communication system by the HAT.

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8. The method of claim 1, further comprising the step of:

wrapping a short message in the signaling message format of the second communication system and transmitting the wrapped short message to the second communication system by the HAT.

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9. The method of claim 1, wherein the first communication system is a CDMA 2000 1x system and the second communication system is a 1xEV-DO system.

5 10. A method of controlling the operation mode of a hybrid access terminal (HAT) capable of communicating a first communication system that supports voice service and low-speed data service and a second communication system that supports high-speed data service, the method comprising the steps of:

10 monitoring both the first and second communication systems in a hybrid operation mode by the HAT;

transitioning from the hybrid operation mode to a data-only operation mode, upon receipt of a message ordering mode transition from the second communication system, discontinuing monitoring the first communication system, and monitoring only the second communication system by the HAT; and

15 reporting the transition to the data-only operation mode to the second communication system by the HAT.

11. The method of claim 10, wherein the first communication system is a CDMA 2000 1x system and the second communication system is a 1xEV-DO system.

20 12. A method of communication with a hybrid access terminal (HAT) capable of communicating a first communication system that supports voice service and low-speed data service and a second communication system that supports high-speed data service, the method comprising the steps of:

determining, upon generation of a signaling message for the HAT, whether the HAT is in a first operation mode monitoring the first communication system or in a second operation mode monitoring the second communication system by the first communication system;

25 30 transmitting the signaling message to the second communication system

by the first communication system, if the HAT is in the second operation mode; and

wrapping the signaling message in a signaling message format of the second communication system and transmitting the wrapped signaling message

5 to the HAT by the second communication system.

13. The method of claim 12, further comprising the step of:

transmitting the signaling message to the HAT by the first communication system, if the HAT is in the first operation mode.

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14. The method of claim 12, wherein the signaling message is a paging message for voice call termination from the first communication system, or a data burst message for transmitting a short message from the first communication system.

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15. The method of claim 12, wherein the first communication system is a CDMA 2000 1x system and the second communication system is a 1xEV-DO system.

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16. A method of receiving a signaling message from a first communication system that supports voice service and low-speed data service during monitoring a second communication system that supports high-speed data service in a hybrid access terminal (HAT) capable of communicating the first communication system and the second communication system, the method comprising the steps of:

receiving from the second communication system a signaling message of the first communication system which is wrapped in a signaling message format of the second communication system; and

processing the signaling message.

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17. The method of claim 16, further comprising the step of:
tuning to the first communication system according to system parameters
of the first communication system and establishing a voice call, if the signaling
message is a paging message for voice call termination from the first
5 communication system.

18. The method of claim 16, further comprising the step of:
extracting a short message from a data burst message and displaying the
short message, if the signaling message is the data burst message for transmitting
10 the short message from the first communication system.

19. The method of claim 16, wherein the first communication system
is a CDMA 2000 1x system and the second communication system is a 1xEV-DO
system.